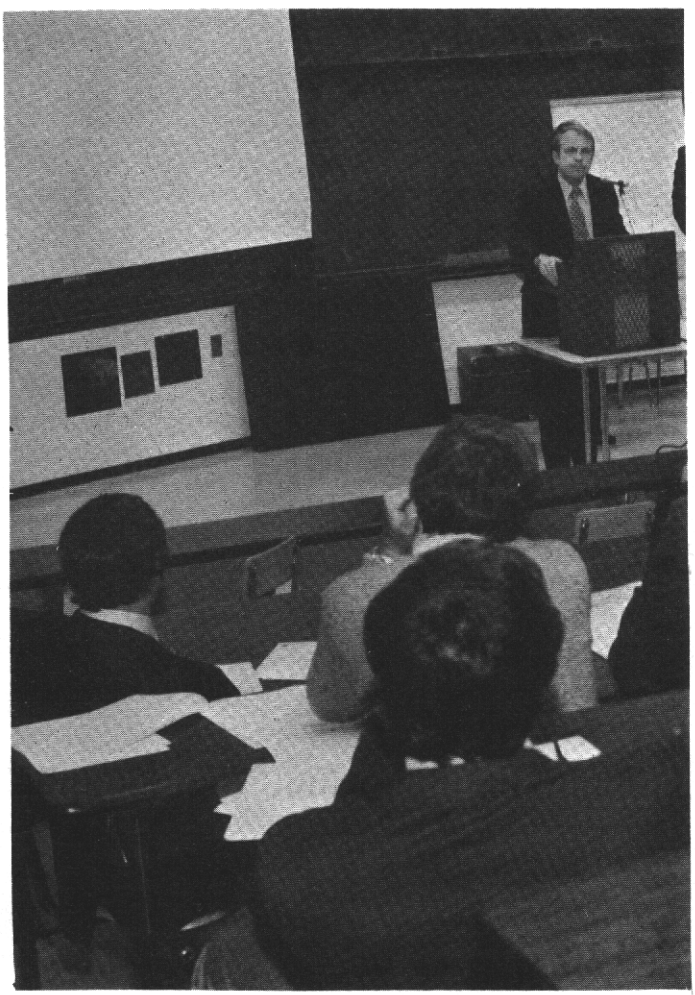
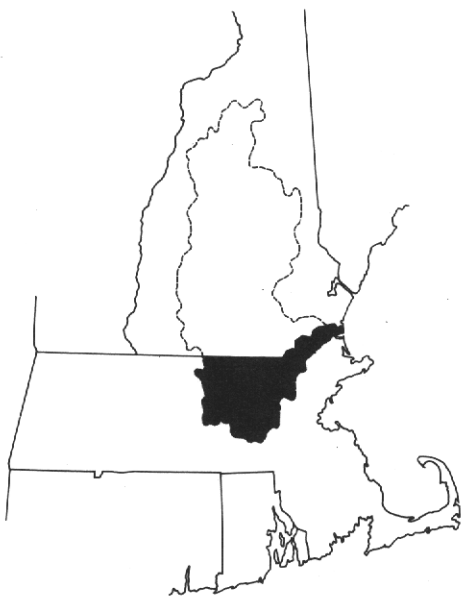
MERRIMACK WASTEWATER MANAGEMENT

key to a clean river



APPENDIX VII

COMMENTS



NORTHEASTERN UNITED STATES WATER SUPPLY STUDY

NOVEMBER 1974

MERRIMACK WASTEWATER MANAGEMENT
INDEX TO REPORT VOLUMES

SUMMARY REPORT

APPENDICES

I. BACKGROUND INFORMATION

I-A GEOLOGIC-HYDROGEOLOGIC INVESTIGATIONS
I-B INDUSTRIAL LISTINGS
I-C LIST OF STUDY CRITERIA AND INSTRUCTIONS

II. PLAN FORMULATION

III. DESIGN AND COSTS (2 Volumes)

IV. IMPACT ANALYSIS AND EVALUATION

IV-A SOCIO-ECONOMIC IMPACTS
IV-B BIOLOGICAL IMPACTS
IV-C AESTHETIC IMPACTS
IV-D HYGIENIC-PUBLIC HEALTH

V. INSTITUTIONAL ARRANGEMENTS

VI. PUBLIC INVOLVEMENT PROGRAM

VII. COMMENTS

MERRIMACK WASTEWATER MANAGEMENT

(KEY TO A CLEAN RIVER)

APPENDIX VII

COMMENTS

July 1975

TABLE OF CONTENTS

A. PREFACE

This Appendix presents the perspectives of various federal, state, regional and local governments on the Merrimack Wastewater Management Study. The study was commenced in the Fall of 1972 and was completed in November 1974 with exception of this Comments Appendix. The report was printed and distributed for public review on 8 May 1975 with a request for comments to be furnished the New England Division by 8 July 1975. Copies of all written comments and responses thereto are included in this volume.

During the course of the study, numerous workshops, presentations and public meetings were conducted under an Open Planning/Public Participation program to inform various local officials and the general public of the study. In total, approximately 100 meetings were held throughout the study area. In addition, information bulletins and brochures were prepared and distributed throughout the two year study period. Feedback and suggestions from the public were received during the study period and were evaluated and mostly incorporated into the planning process. Appendix VI, Public Involvement Program, gives a record on how the study was presented to the public.

During the study, an array of viewpoints was obtained from the public sector, whether they be governmental agencies, local officials, associations and/or concerned citizens, on the wastewater management alternatives. The official public comments contained herein reflect that varied opinion and should be considered in the overall evaluation of the report.

B. INTRODUCTION

The purpose of the Merrimack Wastewater Management Study was to formulate and develop alternative measures for wastewater management including clean-up and restoration of water bodies in the study area in the interest of water supply, environmental quality, recreation, and fish and wildlife. Major tasks undertaken by members of the study team, as per the Commonwealth of Massachusetts Corps of Engineers agreement, included:

1. An evaluation of the aim to achieve maximum water quality.

2. Formulation of a total wastewater management system for the study area.

3. Detailed engineering and planning of a limited number of system projects.

4. An evaluation of institutional alternatives appropriate for implementing the wastewater plan.

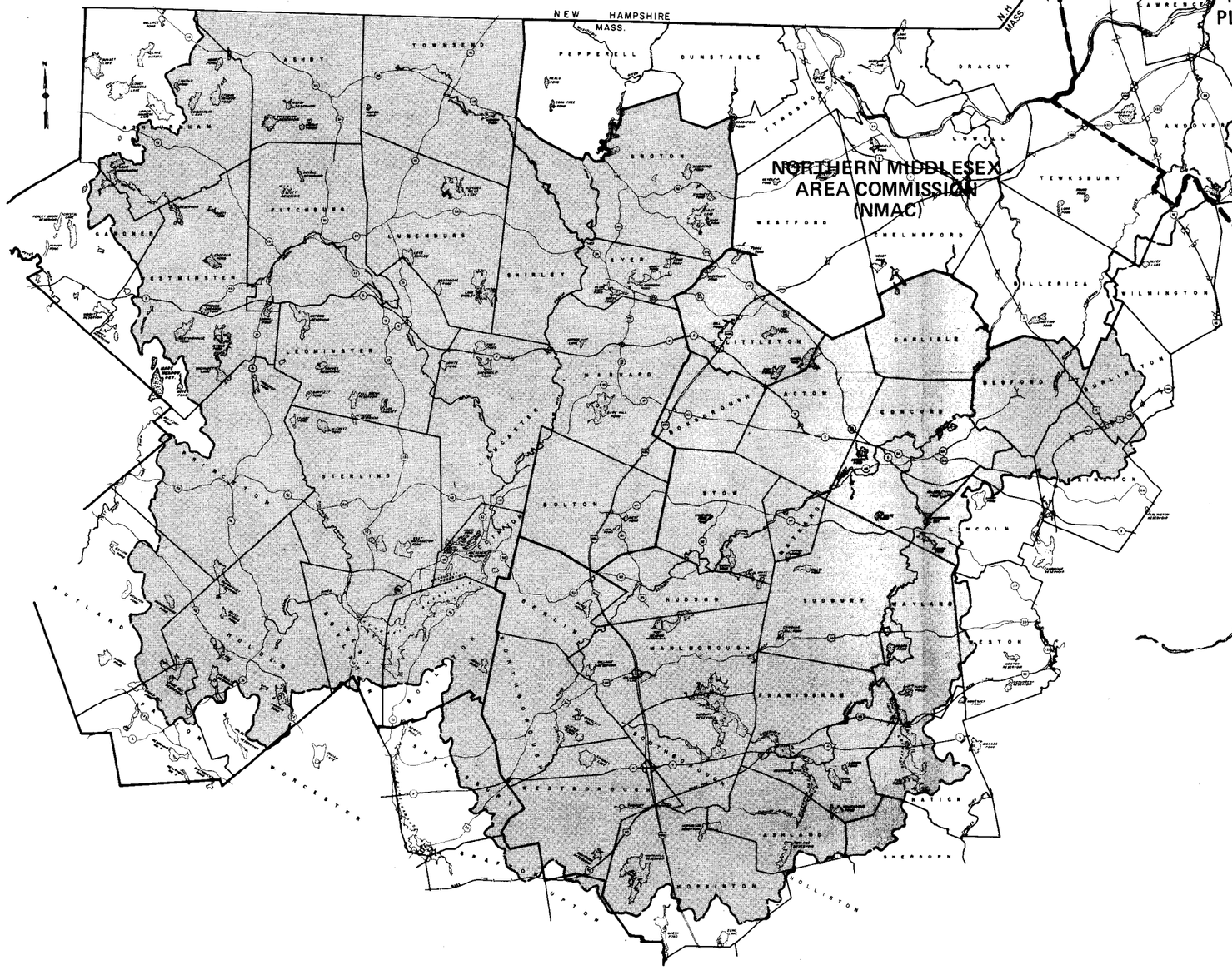
5. An evaluation of cost sharing alternatives appropriate to the wastewater plan.

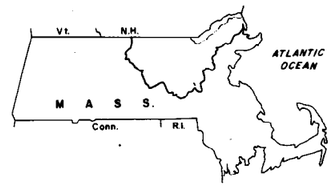
6. An open planning program wherein the desires and considerations of the public could be incorporated into the planning.

C. STUDY AREA

The study area envelopes the twenty-four cities and towns along the lower mainstem of the Merrimack River within the Commonwealth of Massachusetts which also make up the Merrimack Valley Planning Commission and the Northern Middlesex Area Commission. The study area is shown on Figure 1.

TOWNS IN NASHUA RIVER PROGRAM AND SUASCO BASIN





POPULATION PROJECTIONS

AREA	1970	1990	2020
MERRIMACK VALLEY PLANNING COMMISSION (MVPC)			
Amesbury	11,388	17,000	19,500
Andover	23,695	38,000	39,000
Boxford	4,032	8,000	11,000
Georgetown	5,290	7,000	12,000
Groveland	5,382	11,000	13,200
Haverhill	46,120	55,000	61,000
Lawrence	66,915	69,000	71,000
Merrimac	4,245	6,000	6,900
Methuen	35,456	47,000	48,200
Newbury	3,804	5,000	6,600
Newburyport	15,807	18,500	25,000
North Andover	16,284	26,000	29,400
Rowley	3,040	4,000	5,700
Salisbury	4,179	6,000	8,200
West Newbury	2,254	3,300	4,000
Total	247,891	320,800	360,700
NORTHERN MIDDLESEX AREA COMMISSION (NMAC)			
Billerica	31,648	48,900	48,900
Chelmsford	31,432	43,600	43,600
Dracut	18,214	34,000	37,200
Dunstable	1,292	4,100	18,000
Lowell	94,239	101,200	100,800
Pepperell	5,887	15,200	27,300
Tewksbury	22,755	39,600	39,600
Tyngsborough	4,204	9,300	23,200
Westford	10,368	34,100	35,800
Total	220,039	330,000	374,400
Total for MVPC, NMAC	467,930	650,800	735,100
Total for Remainder of Merrimack River Basin in Massachusetts	625,855	862,700	1,190,700
Total for Merrimack River Basin in Massachusetts	1,093,785	1,513,500	1,925,800
Commonwealth of Massachusetts	5,689,170	6,640,100	7,979,400

Figure 1

MERRIMACK RIVER BASIN IN MASSACHUSETTS

D. VALUE OF THE STUDY

The study directed its attention to addressing the goals and requirements of Public Law 92-500, titled: "Federal Water Pollution Control Act Amendments of 1972." The summarized findings and recommendations of the study can be found in Chapter 7 of the Summary Report.

The report will be of value to the Commonwealth of Massachusetts, the Regional Planning Agencies and others concerned with carrying out various programs of Public Law 92-500 in the study area. The information generated as part of the study will be of special utility to those agencies charged with planning responsibilities under Sections 201, 208 or 303 of the Act.

E. REPORT MAILING LIST

The following agencies, officials, interest groups and individuals received a complete copy of the Merrimack Report and its supporting appendices.

Elected Officials (Senators and Representatives)

Honorable Edward P. Boland
House of Representatives
Washington, D.C. 20515

Honorable Edward P. Boland
Representative in Congress
326 Post Office Building
Springfield, Mass. 01101

Honorable Edward W. Brooke
United States Senate
Washington, D.C. 20510

Honorable Edward W. Brooke
U.S. Senator
2003H JFK Federal Building
Boston, Mass. 02203

Honorable James A. Burke
House of Representatives
Washington, D.C. 20515

Honorable James A. Burke
Representative in Congress
47 Washington Street
Quincy, Mass. 02169

Honorable James C. Cleveland
House of Representatives
Washington, D.C. 20515

Honorable James C. Cleveland
Representative in Congress
316 Federal Building
Pleasant Street
Concord, N.H. 03301

Honorable Silvio O. Conte
House of Representatives
Washington, D.C. 20515

Honorable Silvio O. Conte
Representative in Congress
7 North Street
Pittsfield, Mass. 01202

Honorable Robert F. Drinan
House of Representatives
Washington, D.C. 20515

Honorable Robert F. Drinan
Representative in Congress
400 Totten Pond Road
Waltham, Mass. 02154

Honorable Michael S. Dukakis
Governor of Massachusetts
State House
Boston, Mass. 02133

Honorable Joseph D. Early
Representative in Congress
34 Mechanic Street
Worcester, Mass. 01608

Honorable Joesph D. Early
House of Representatives
Washington, D.C. 20515

Honorable Michael J. Harrington
House of Representatives
Washington, D.C. 20515

Honorable Michael J. Harrington
Representative in Congress
Salem Post Office Building
Salem, Mass. 01970

Honorable Margaret M. Heckler
House of Representatives
Washington, D.C. 20515

Elected Officials (Senators and Representatives) cont'd

Honorable Margaret M. Heckler
Representative in Congress
1 Washington Street
Wellesley Hills, Mass. 02181

Honorable Edward M. Kennedy
United States Senate
Washington, D.C. 20510

Honorable Edward M. Kennedy
U.S. Senator
2400A JFK Federal Building
Boston, Mass. 02203

Honorable Torbert H. Macdonald
House of Representatives
Washington, D.C. 20515

Honorable Torbert H. Macdonald
Representative in Congress
2100A JFK Federal Building
Boston, Mass. 02203

Honorable Thomas P. O'Niell, Jr.
House of Representatives
Washington, D.C. 20515

Honorable Thomas P. O'Niell, Jr.
Representative in Congress
2200A JFK Federal Building
Boston, Mass. 02203

Chairman
Public Works Committee
U.S. House of Representatives
Washington, D.C. 20515

Chairman
Public Works Committee
U.S. Senate
Washington, D.C. 20510

Honorable Gerry E. Studds
House of Representatives
Washington, D.C. 20515

Honorable Gerry E. Studds
Representative in Congress
1143 Washington Street
Hanover, Mass. 02339

Honorable Paul E. Tsongas
House of Representatives
Washington, D.C. 20515

Honorable Paul E. Tsongas
Representative in Congress
50 Kearney Square, Room 216
Lowell, Mass. 01852

Local Officials, Agency Personnel, Citizens

Local Officials:

Mr. Richard A. Adams, Sr.
Chairman, Board of Selectmen
176 Deering Drive
Tewksbury, Mass. 01876

Mr. J. Maynard Austin
Town Manager
Town Hall
20 Main Street
Andover, Mass. 01810

Honorable John J. Buckley
Mayor of the City of Lawrence
City Hall
200 Common Street
Lawrence, Mass. 01840

Mr. Irving A. Burrill
Chairman, Board of Selectmen
Stewart Street
West Newbury, Mass. 01985

Mr. Leo F. Downing
Chairman, Board of Selectmen
4 Anne Street
Groveland, Mass. 01830

Mr. H. Francis Drenth
Chairman, Board of Selectmen
74 West Main Street
Merrimac, Mass. 01860

Mr. Norman A. Dupuis
Chairman, Board of Selectmen
Norris Road
Tyngsborough, Mass. 01879

Mr. Dexter Dutney
Chairman, Board of Selectmen
11 Oliver Drive
Dracut, Mass. 01862

Mr. Henry Fournier
Chairman, Board of Selectmen
240 Elm Street
Amesbury, Mass. 01913

Mr. Milton Greenberg
Chairman, Board of Selectmen
46 Sagamore Drive
Andover, Mass. 01810

Mr. William Handren
Chairman, Board of Selectmen
199 Pond Street
Georgetown, Mass. 01833

Honorable George K. Katsaros
Mayor of the City of Haverhill
City Hall
4 Summer Street
Haverhill, Mass. 01830

Mr. John P. Kirk
Chairman, Board of Selectmen
26 Pleasant Street
North Andover, Mass. 01845

Mr. Charles Killam
Chairman, Board of Selectmen
Town Hall
Boxford, Mass. 01921

Mr. Gerald Lannon
Chairman, Board of Selectmen
8 Colonial Drive
Chelmsford, Mass. 01824

Honorable Armand Lemay
Mayor of the City of Lowell
26 Shea Street
Lowell, Mass. 01854

Mr. Joesph J. Lyons
Chairman, Board of Selectmen
13 Circuit Drive
Rowley, Mass. 01969

Honorable Byron J. Matthews
Mayor of the City of Newburyport
City Hall
Pleasant Street
Newburyport, Mass. 01950

Local Officials, Agency Personnel, Citizens (cont'd)

Local Officials:

Mr. Dana A. Miller
Town Administrator
Town Hall
90 Hampshire Street
Methuen, Mass. 01844

Mr. Walter T. Morse
Chairman, Board of Selectmen
Town Hall
Beach Road
Salisbury, Mass. 01950

Mr. Paul Newman
Chairman, Board of Selectmen
761 Boston Road
Billerica, Mass. 01821

Mr. Harold R. Pillsbury, Jr.
Chairman, Board of Selectmen
Brookline Street
Pepperell, Mass. 01463

Mr. Samuel Richards, Jr.
Chairman, Board of Selectmen
38 Old Lowell Road
Westford, Mass. 01886

Mr. George Tully
Chairman, Board of Selectmen
Hollis Street
Dunstable, Mass. 01827

Agency Personnel, Citizens:

Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138
ATTN: Mr. John Willson

Anderson-Nichols and Co., Inc.
150 Causeway Street
Boston, Mass. 02114
ATTN: Mr. Silbermann

Mr. John A. Baker
District Chief
U.S. Geological Survey
150 Causeway Street
Boston, Mass. 02114

Mr. Arthur Brownell
Commissioner
Department of Natural Resources
100 Cambridge Street
Boston, Mass. 02203

Mr. William J. Byrne
Commissioner
Metropolitan District Commission
20 Somerset Street
Boston, Mass. 02108

Mr. John B. Casazza
Division of Water Pollution Control
100 Cambridge Street
Boston, Mass. 02202

Mr. Vincent Ciampa
Environmental Affairs
Comm. of Massachusetts
18 Tremont Street
Boston, Mass. 02108

Mrs. Barbara Fegan
Box 545
South Wellfleet, Mass. 02663

Mr. James Gaines
Merrimack Valley Planning Comm.
87 Winter Street
Haverhill, Mass. 01830

Mr. Donald A. George
Chairman
Greater Lawrence Sanitary District
598 Essex Street P.O. Box 382
Lawrence, Mass. 01840

Agency Personnel, Citizens cont'd

Mrs. Joan Gilliatt
4 Tobey Lane
Andover, Mass. 01810

Mr. Malcolm Graf
Department of Public Works
Comm. of Massachusetts
100 Nashua Street
Boston, Mass. 02114

Mr. Frank Gregg
New England River Basins Comm.
55 Court Street
Boston, Mass. 02108

Mr. Richard E. Griffith
Regional Director
Fish & Wildlife Service
U.S. Dept. of the Interior
U.S. Post Office & Court House
Boston, Mass. 02109

Mr. Joseph Hannon
Northern Middlesex Area Comm.
144 Merrimack Street
Lowell, Mass. 01852

Mr. John Harrington
Metropolitan Area Planning Council
44 School Street
Boston, Mass. 02108

Mr. Regis J. Harrington
Division of Planning
Dept. of Commerce & Development
100 Cambridge Street
Boston, Mass. 02202

Mr. Kenneth Johnson
Environmental Protection Agency
JFK Building
Boston, Mass. 02108

Mr. Charles Kennedy
Water Resources Commission
100 Cambridge Street
Boston, Mass. 02202

Mr. Lester Klashman
198 Maple Street
Malden, Mass. 02148

Mr. Arthur Lamson
22 Lake Attitash
Amesbury, Mass. 01913

Mr. Daniel McGillicuddy
Resources Management Policy Council
Comm. of Massachusetts
18 Tremont Street
Boston, Mass. 02108

Mr. John A.S. McGlennon
Regional Administrator
Environmental Protection Agency
Region I
JFK Building
Boston, Mass. 02108

Mr. Thomas McMahon
Director
Division of Water Pollution Control
100 Cambridge Street
Boston, Mass. 02202

Dr. Evelyn F. Murphy
Comm. of Massachusetts
Executive Office of Environmental Affairs
18 Tremont Street
Boston, Mass. 02108

National Commission on Water Quality
P.O. Box 19266
Washington, D.C. 20036
ATTN: Mr. Joe G. Moore, Jr.

Agency Personnel, Citizens cont'd

Mr. Walter M. Newman, Chief
Water Branch
Environmental Protection Agency
JFK Building
Boston, Mass. 02109

Normandeau Associates, Inc.
Nashua Road
Bedford, New Hampshire 03102

Mr. Alfred Peloquin
New England Interstate Water
Pollution Control Commission
607 Boylston Street
Boston, Mass. 02116

Mr. David Pickman
Environmental Protection Agency
JFK Building
Boston, Mass. 02108

Mr. John Pobst
Montachusetts Regional Planning
Commission
150 Main Street
Fitchburg, Mass. 01420

Mr. Stephen Poole
Nashua River Program
22 Beacon Street
Fitchburg, Mass. 01420

Mr. Edward Selig
Bracken and Selig
140 Federal Street
Boston, Mass. 02110

Mrs. Norman Sevigny
56 Totman Road
Lowell, Mass. 01854

Mrs. Marion Stoddart
Farmers Row
Groton, Mass. 01450

Mr. Floyd Taylor
Environmental Protection Agency
JFK Building
Boston, Mass. 02108

Mr. David Terry
Dept. of Community Affairs
Comm. of Massachusetts
100 Cambridge Street
Boston, Mass. 02202

Mr. Edward A. Thomas
U.S. Dept of Housing & Urban
Development
Boston Regional Office
JFK Federal Building
Boston, Mass. 02203

Mr. Nathan Tufts
101 River Road
Merrimack, Mass. 01810

Mr. Martin Weiss
Environmental Engineer
Metropolitan District Commission
20 Somerset Street
Boston, Mass. 02108

Mr. Richard Young
Division of Water Pollution Control
100 Cambridge Street
Boston, Mass. 02202

F. COMMENTS RECEIVED

PAUL E. TSONGAS
5TH DISTRICT, MASSACHUSETTS

WASHINGTON OFFICE:
419 CANNON HOUSE OFFICE BUILDING
WASHINGTON, D.C. 20515
(202) 225-3411

COMMITTEES:
BANKING, CURRENCY AND HOUSING
INTERIOR AND INSULAR AFFAIRS

DENNIS R. KANIN
ADMINISTRATIVE ASSISTANT

Congress of the United States
House of Representatives
Washington, D.C. 20515

DISTRICT OFFICES:
GREATER LOWELL
ROOM 216, 50 KEARNEY SQUARE
LOWELL, MASSACHUSETTS 01852
(617) 459-0101

GREATER LAWRENCE
469 ESSEX STREET
LAWRENCE, MASSACHUSETTS 01840
(617) 683-5313

MINUTEMAN TOWNS
185 BEDFORD STREET
LEXINGTON, MASSACHUSETTS 02173
(617) 862-1847

469 Essex Street
Lawrence, MA 01840
May 16, 1975

Colonel John H. Mason
Division Engineer
New England Division
Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02154

Dear Colonel Mason:

Due to the amount of material contained in the Merrimack River Wastewater Treatment Study, I would appreciate your extending the comment period for local communities to a minimum of sixty days.

I feel that the present period is inadequate for a responsible response to such an important study.

Thank you for your cooperation.

Sincerely,

Paul

PAUL E. TSONGAS
Member of Congress

PET:dt

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

REPLY TO
ATTENTION OF:

NEDPL-W

2 June 1975

SUBJECT: Merrimack Wastewater Management Study Report

TO: State and Local Officials, Reviewing Agencies and Citizens of the Merrimack River Basin

In view of the voluminous material presented in subject report, the requested review and comments period has been extended from 30 to 60 days. Review comments will now be welcomed through 8 July 1975.

As mentioned in the distribution notice of 8 May 1975, all comments received within the review period will be incorporated into the Comments Appendix (VII) which will be distributed as part of the overall report.

Sincerely,

JOHN H. MASON
Colonel, Corps of Engineers
Division Engineer

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203

JUL 11 1975

REGION I

IN REPLY REFER TO:
1D

John H. Mason
Colonel, Corps of Engineers
Division Engineer
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Colonel Mason:

Subject: Merrimack Wastewater Management Study Report

This will acknowledge receipt of the report which was mailed to Edward Thomas.

We have no substantive comments to offer with respect to the technical aspects of the report. Our primary concern is how the planning work, studies, plans and programs are integrated into the comprehensive planning programs of the State, regional planning agencies, metropolitan cities and smaller municipalities, particularly as they relate to land use issues, plans and programs.

It would be most helpful, if the Corps of Engineers could maintain a semi-annual or annual reporting on the progress made with respect to adoption of plans and the initiation and implementation of specific projects. This should be useful to us, the Office of State Planning and to the affected regional planning commissions in Massachusetts.

We will retain these reports in our planning library for future reference.

We appreciate the opportunity you provided the Department to review and comment on the Report.

Sincerely,

Harold G. Thompson
Acting Regional Administrator

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

REPLY TO
ATTENTION OF:
NEDPL-W

24 July 1975

Mr. Harold G. Thompson
Acting Regional Administrator
Department of Housing and Urban Development
John F. Kennedy Federal Building
Boston, Massachusetts 02203

Dear Mr. Thompson:

This reply is to acknowledge receipt of your comments on the Merrimack Wastewater Management Study.

All the alternatives presented in the report, including the recommended plan, incorporated as a basis for design, the ongoing State-EPA program for pollution abatement, future land use plans and regional water and sewer plans as prepared by the regional planning agencies of the study area.

Because the Corps of Engineers' mission in wastewater management was one of strictly planning, we have no authority to implement any plan or components or plans that are presented in the report. The adoption of plans and the initiation and implementation of specific projects will therefore require action by the appropriate Federal and State agencies in accordance with their established priorities. Our task was simply to perform a planning service and assist the state and regional agencies in meeting the goals and requirements of the Federal Water Pollution Control Act Amendments of 1972. However, due to extensive interagency cooperation and coordination, much of the material developed as part of the Merrimack Wastewater Management Study has been included in Massachusetts Division of Water Pollution Control 303(e) Basin Plan for the Merrimack River. The Basin Plan, to be evaluated and modified in five year increments, will be the principal means of obtaining Federal construction grants for future water pollution control projects in the Merrimack River Basin.

Sincerely,

JOHN H. MASON
Colonel, Corps of Engineers
Division Engineer

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Post Office and Courthouse Building
BOSTON, MASSACHUSETTS 02109

JUL 1 ? 1975

Division Engineer
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Sir:

This letter is in response to your May 8, 1975, request for our review and comments on the Merrimack Wastewater Management Study Report. This voluminous report represents a great amount of study effort and covers a complex and difficult subject rather well. However, even with our extended period for review of the study (4,200 pages), it is impossible to become fully familiar with all of its aspects.

Some of the proposed treatment alternatives have potentially great environmental effects. These potentials have been recognized in the report and should receive more attention as the selection of alternatives is made more definite and plans for specific actions are drawn up.

We offer the following specific comments:

Summary Report

Page 17, Column 1, last paragraph, 3rd sentence: It is stated that "...the abundance of the estuary clam flats was lost...". This should be clarified. The clam flats remain productive and could possibly become open to harvest in the future if and when water quality is improved. The first three lines on Page 119 of Appendix IV-B state "...that pollution has had little or no direct effect on the soft shell clam population's viability...".

Page 23, Column 1, 2nd paragraph, last sentence: It is stated that "...new facility sites were selected on the basis of practicality." Environmental impact should be considered also.

Page 23, Column 2, Water Consumption, 2nd paragraph: We believe that when projecting future per capita water use there should be a discussion of water

conservation measures. Programs to promote water saving devices and cost scales that would help promote conservation practices should receive attention.

Appendix I, Background Information

Page 21, paragraph 3: It is stated that, during colonial times, the Merrimack supported large runs of hickory shad. The hickory shad is a southern fish, with the Gulf of Maine as the extreme northern limit to its range. It is doubtful that the Merrimack supported runs of hickory shad comparable to its runs of other anadromous fishes.

Table 48, page 208: The Merrimack River is listed as the planned additional public water supply source for Andover and Lowell. It is also listed as having an unlimited yield. In view of increasing demands upon the Merrimack River, it must be pointed out that there is not an unlimited supply of water. Critical periods for municipal water supply, summer months, are also the months when river flows are naturally lower. There are definitely limits below which river flows cannot be artificially lowered without causing harmful environmental effects.

Table 85, page 366: Same as last comment, except for existing supply source for Lawrence, Methuen, and Lowell.

Table 86, page 368: Same comment as Table 48, page 208.

Page 379: Again, the Merrimack is listed as an unlimited future source of water.

Appendix IV-B, Biological Impacts, Volume 1

Page I, Summary, Introduction, sentence 1: The figure of 130,000,000 gallons of raw and partially treated municipal and industrial wastewater is different from that given on page 1, A: Statement of the Problem.

Page I, paragraph 2, 8th sentence: A species that is successful in a polluted environment is not occupying the same "niche" as was previously occupied by a species intolerant of pollution. Conditions changed and eliminated the niche occupied by the intolerant species.

Page 2, paragraph 3, first sentence: The ability of rivers to recover from pollution, once pollution is abated, should be further described. Build up of polluted sediments behind dams can lengthen the recovery process.

Page 5, Figure 2: Terrestrial site number 7 in figure 27, page 192, is shown as being in a different location than on this map.

Page 25, last paragraph (continued on Page 26): The definition of niche as living space is an oversimplification. A niche is multi-faceted and must meet

all the requirements of a species, not just spatial requirements.

Page 294, first paragraph, line 15: "Establishment" should be changed to "reestablishment."

Sincerely yours,

ACTING Regional Director

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

REPLY TO
ATTENTION OF:

NEDPL-W

15 July 1975

Mr. Richard E. Griffith
Regional Director
Fish and Wildlife Service
U.S. Department of Interior
U.S. Post Office and Court House
Boston, Massachusetts 02109

Dear Mr. Griffith:

This reply is to acknowledge receipt of your comments on the Merrimack Wastewater Management Study. The time and effort you have expended in reviewing the report are greatly appreciated. Your letter will be included in the Comments Appendix and become part of the official report when it is forwarded to Congress.

Sincerely,

JOHN H. MASON
Colonel, Corps of Engineers
Division Engineer

OFFICE OF THE DIRECTOR
DIVISION OF WATER RESOURCES

The Commonwealth of Massachusetts
Water Resources Commission
Leverett Saltonstall Building, Government Center
100 Cambridge Street, Boston 02202

July 7, 1975

Colonel John H. Mason, Division Engineer
Corps of Engineers, New England Division
424 Trapelo Road
Waltham, Mass. 02154

Dear Colonel,

We were pleased to receive the final report volumes of the Merrimack River Wastewater Management Study. This Division has found participation in this study both educational and productive.

There is recognition that the work doesn't provide all the answers but does represent a major step in determining the implications, costs and effects of meeting the P.L. 92-500 mid-1980's goal of fishable/swimmable water in the Merrimack River through the elimination of pollutional discharges.

We would urge that the pursuits and objectives of this study be continued in future ongoing 208 or 303E wastewater control planing efforts as there is good potential for increased utilization of the Merrimack River for water supply purposes.

The only volume of this report which suggests any comments at this stage would be Appendix V Institutional Arrangements.

As a broad statement, the existing institutional configuration of state agencies is currently in transition towards a set up quite different from the listing and descriptions portrayed in this volume. The reorganization of state government has begun July 1 and as a point of information will effect all the appropriate agencies listed in this report.

In the section on related legislation to Key Water Quality Management Agencies two additional points should be made. The first, under the "Flood Disaster Protection Act" section whereby this division as the official state coordinating agency for the implementation of this legislation views it as a strong impetus in encouraging communities to adopt wise land use controls and policies.

The second addition would fall under the Wetlands Act section. Here, it should be noted that the Wetlands Protection Act has been strengthened and expanded to include bordering wetland areas subject to flooding. Furthermore, the Inland Wetlands Restriction Act (M.G.L. C. 131 Section 40A) should be mentioned separately as restricting the use of wetlands in a more permanent manner through area-wide delineations, public hearings and registry of deeds recordation.

Finally, the Corps of Engineers is to be complemented on conducting a valuable, efficiently-run study, one that encouraged our cooperation and participation.

Respectfully submitted,

Charles F. Kennedy
Director and Chief Engineer

CFK/PW/g

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

REPLY TO
ATTENTION OF:

NEDPL-W

15 July 1975

Mr. Charles F. Kennedy
Director and Chief Engineer
Water Resources Commission
100 Cambridge Street
Boston, Massachusetts 02202

Dear Mr. Kennedy:

This reply is to acknowledge receipt of your comments on the Merrimack Wastewater Management Study. We are most appreciative of the time and effort you have expended throughout the study and its success is directly attributable to the efforts of you and your staff. Only through extensive interagency cooperation and coordination could such a study have been carried out. It's encouraging to note that much of the information generated during the Merrimack Study has been incorporated into the Massachusetts Division of Water Pollution Control 303 (e) Basin Plan for the Merrimack River. The Basin Plan will be the key vehicle for obtaining Federal construction grants for future water pollution control projects throughout the Merrimack River.

Sincerely,

JOHN H. MASON
Colonel, Corps of Engineers
Division Engineer

The Commonwealth of Massachusetts
Metropolitan District Commission
20 Somerset Street, Boston 02108

William J. Byrne, Jr.
Commissioner

July 1, 1975

Colonel John H. Mason,
Division Engineer
Corps of Engineers
424 Trapelo Road
Waltham, Mass. 02154

Dear Colonel Mason:

I am forwarding comments on the Merrimack Wastewater Management Study Report submitted by Director of Environmental Quality Ferullo.

Very truly yours,

MARTIN F. COSGROVE
Chief Engineer

Encl.: As Noted

MFC:Inn

FORM ADM 2. 10M-2-73-075561

THE COMMONWEALTH OF MASSACHUSETTS

INTER OFFICE CORRESPONDENCE METROPOLITAN DISTRICT COMMISSION

From Alfred F. Ferullo, Dir. Div. Env. Quality May 29, 1975 19

Attention of

Subject Comments on Merrimack Wastewater Management Report

Page numbers refer to Summary Report.

p. 27 It is not clear whether "effluent filtration" under the physical-chemical process is sand filtration or activated carbon filtration.

The comparison between biological treatment and physical-chemical treatment technologies appears unfair. Biological treatment will remove a variety of toxic materials as will chemical-physical treatment. It would be difficult to design a chemical-physical plant that would not remove some toxic materials.

p. 32 The objective of sludge treatment and disposal is to get maximum benefit or re-use from the disposal of what has generally been considered a waste product. Decrease in volume of sludge is important if it is to be transported dry. Incineration is very effective in reducing organic matter and total volume.

Alfred F. Ferullo

ALFRED F. FERULLO

AFF/g

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

REPLY TO
ATTENTION OF:

NEDPL-W

15 July 1975

Mr. Martin F. Cosgrove
Metropolitan District Commission
20 Somerset Street
Boston, Massachusetts 02108

Dear Mr. Cosgrove:

This reply is to acknowledge receipt of your comments on the Merrimack Wastewater Management Study. We appreciate the time and effort you have invested in reviewing the report. Your letter will be included in the Comments Appendix and become part of the official final report.

Sincerely,

JOHN H. MASON
Colonel, Corps of Engineers
Division Engineer

MERRIMACK VALLEY PLANNING COMMISSION MVPC

eighty-seven winter street, haverhill, massachusetts 01830 617/374-0519

June 27, 1975

Mr. James Callahan
Army Corps of Engineers
424 Trapelo Raod
Waltham, Massachusetts 02154

Dear Mr. Callahan:

The following are the comments expressed by the Merrimack Valley Planning Commission in regards to the Merrimack Wastewater Management Study. Almost all the comments are addressed towards policies and major assumptions due to the fact that most of the feedback we have received is of this nature. We will do our best to cover the major points that appear to be of some conjecture. Hopefully this will help you clarify or modify them as the case may be in the final reports.

There are, however, a few general comments which should be addressed first.

There has been some concern over exactly what this Report really can accomplish. Specifically, the fact that nothing was done in regards to nonpoint source pollution severly limits the development of comprehensive water quality plans because the total pollution load is not determined nor broken down in terms of the various sources contributing to that pollution. One could counter by saying that this study was only supposed to deal with developing alternative configurations for point source abatement, but the recommended alternative could conceivably have no relationship to the recommended plan that emerges under 208 due to unforseen non point source problems that must be handled to satisfy waste load allocations and ultimately water quality.

Another general comment concerns the discrepancy which is evident between what the MWMS feels is a good public participation program and what some of the communities in the MVPC feel is a good or satisfying public participation program. This obviously will not be

resolved in any final report production, however, everyone might benefit somewhat if a final session was set up to air the productive and not so productive actions of all and discuss ways to improve them in the future.

The following comments are responses to the Summary Report:

(1) On page 10 the question of not treating urban run-off will have to be rethought in any subsequent 208 Study. Any toxins that might be involved in urban run-off must be eliminated to satisfy 1983 Goals.

(2) On the bottom of page 19, in order to project clearly what you mean by long and short term time periods, it might be wise to list dates with each time frame.

(3) (Page 21 right column) What were the reasons for having only one land use alternative? This is important because the Principles and Standards of the Water Resource Council suggest that at least two alternatives (environmental and economic) should be looked into. Perhaps your six alternatives cover this adequately.

(4) It is suggested that all sources of figures be listed on pages 24 - 26 so that the reader knows immediately the variables and any biases that may be associated with them.

(5) (Page 79) In the bottom table, the column under 1977, why is there such a tremendous discrepancy in dollars being paid out by the towns? Does it seem reasonble for Haverhill to pay 6 times what Lawrence will? Can Salisbury, a community of a few thousand people be expected to come up with over 2½ million dollars? We all know that water treatment is an expensive proposition but we must also relate it to the town's ability to pay. The "equity" problem must be reviewed here.

(6) (Page 89) The discussion on this page (specifically at the bottom of the left column and top of right column) does not make it easy for towns to contribute money to a project that very well may never satisfy requirements of water quality.

(7) (page 93) (Paragraph under Step 1) It is questionable as to whether a "best plan" to implement 92-500 has been stated due to missing non-point information.

(8) (Page 95) (Study Accomplishment #1) It's unfortunate that a consensus wasn't reached by the towns in terms of the recommended plan. After all, they're going to be putting up part of the bill.

Plan Formulation Volume 6 - Comments

1. (Page 86 - near bottom) Why did the Study Team consider specifically Land Treatment application in the first iteration? If there was a particular reason, it probably should be mentioned right here.

2. (Page 176 - Criteria for Screening) A short description of who developed the criteria to fortify their comprehensiveness should be in here. These are mighty big statements with far-reaching consequences and need as much support as possible.

Aesthetic Impacts Volume 13 - Comments

1. (Page 5) - "E" - Recreation/Construction Impacts
Does this make sense when thought of in terms of secondary impacts and associated pressures for development on this possible limited open space?

2. A general comment - There is a significant amount of information published substantiating the positive visual effects attributed to water in the landscape. (Zube, etc.) Perhaps the use of "holding" reservoirs for future treatment could elicit a positive visual impact besides that of outfalls as listed on page 72.

Institutional Arrangements Volume 15 - Comments

1. (Page 19) The RMPC is to our knowledge, no longer in existence in the Commonwealth of Massachusetts.

That concludes our major comments. We hope they will prove helpful and will be taken into consideration if appropriate.

Sincerely,

R. Jeffrey Riotte

R. Jeffrey Riotte
Senior Planner

RJR:srh
6-27-75

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

REPLY TO
ATTENTION OF:

NEDPL-W

11 July 1975

Mr. R. Jeffrey Riotte
Merrimack Valley Planning Commission
87 Winter Street
Haverhill, Massachusetts 01830

Dear Mr. Riotte:

This reply is to acknowledge the receipt of your comments on the Merrimack River Wastewater Management Study Report. We appreciate the time and effort you have invested in the review of the report and wish to respond to certain issues that are raised in your letter.

In reference to what the report will accomplish: Due to the inter-agency coordination and cooperation throughout the study and at the request of the Executive Office of Environmental Affairs much of the results of the Merrimack Study, including the town configurations presented in the Recommended Plan, have been incorporated into the official 303 (e) Basin Plan for the Merrimack River. The Basin Plan, to be modified and updated in five year increments, will be the principle vehicle for obtaining Federal construction grants for water pollution control projects throughout the Merrimack Basin.

Regarding non-point sources: Since EPA and the Massachusetts Division of Water Pollution Control are both cognizant of the complexity and costs of assessing the impact on water quality due to non-point sources of pollution and recognizing that the Merrimack mainstem is an "effluent limited" segment, we don't feel that the failure to develop a total pollution load from non-point sources jeopardizes the configuration of the recommended plan.

We wholeheartedly agree with an open critique and review of the public participation efforts conducted during the Merrimack Study. Since we invested over $100,000 and sponsored over 100 meetings, workshops, etc., we would be very interested in developing methods to carry out a more effective public participation program. If your agency would care to sponsor such a forum we would welcomely participate.

Sincerely,

JOSEPH L. IGNAZIO
Chief, Planning Division

TOWN OF ANDOVER
MASSACHUSETTS
01810

Town Hall
20 Main Street

July 1, 1975

Colonel John H. Mason
Division Engineer
Department of the Army
New England Division
Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02154

Attention: Chief, Planning Division

Dear Colonel Mason:

In accordance with your letters of 8 May 1975 and 23 May 1975, the Town of Andover hereby provides its review and comment on the draft report of the Merrimack Wastewater Management Study.

I. Scope and Purpose of the Study

A. General

At the beginning, it is not clear exactly how the Study was to relate to PL92-500. At one point (Appendix I-C, p. 1), it is stated: "Neither phase of the Study was directed to be accomplished in accordance with any specific sections of PL92-500, such as 201, facilities planning, 208 area-wide planning, etc." But, later (Appendix IV, p. 17):

> As mentioned previously, the Merrimack Wastewater Management Study was a prototype in regional wastewater management planning with the principal task of addressing the goals and requirements of the Federal Water Pollution Control Act Amendments of 1972, particularly the requirements of Sections 201 and 208. One of the problems confronting the study team was the varying interpretations of the requirements of the Act, particularly with respect to Sections 201, 208 and 303."

There is a similar contradiction regarding the development of the plan of study. This is particularly important as it relates directly to the Agreement between the Corps of Engineers and the Commonwealth. In one place (Appendix IV, p.4), it is stated:

> In all honesty, the process was never explicitly spelled out before the wheels started turning but rather the entire study effort was a learning experience for the members of the interagency study team.

Then, a few pages later (Appendix IV, p.11):

> Once the plan of study had been formulated and approved by the member agencies of the Merrimack Technical Subcommittee, contractual scopes of work were developed to acquire the assistance necessary to complete the designated work items.

The latter statement is in line with the Corps-Commonwealth Agreement. But, what really happened?

B. Editorializing

Looking to the authorizing Resolutions of Congress and the Corps-Commonwealth Agreement, the clear purpose of the Study, in brief, is to develop facts, examine alternatives and formulate plans.

Thus, we are deeply disturbed with much of Appendix IV, which too often becomes an exercise in editorializing. Statements such as the following are completely out of place in this Study:

> Regional solutions, therefore, have to be developed and their impacts assessed from the perspectives of a much higher level of government. The general well being of existing generations and generations to come can most effectively be assured by positive action from the Federal Government.
>
> (Appendix IV, p.5)

> [T]here are still many professionals within private consulting firms and governmental agencies charged with responsibilities in water quality management planning who have yet to seriously consider impact assessments as an integral part of the formulation of alternative solutions.
>
> (Appendix IV, p.6)

C. Unwarranted Presumptions and Speculation

As public officials, we are made uneasy when this Study wanders from its explicit purposes. We are disturbed in reading a statement which says (Summary, p.21):

> Recalling the overall purpose of the Merrimack Study, the wastewater management system alternatives developed were not only to renovate effluents fully but also to influence the future of valley communities. (Emphasis added)

That all other elements in the quality of life revolve around wastewater management is an assumption which is improper. None of the documents authorizing the Study provides it with a charter as broad as the last clause of the last quotation would indicate.

Similarly, we consider it improper for the reporting officer to recommend (at Summary, p.97) "That the results of this report be utilized by Federal, State, Regional and local entities as a baseline for more detailed planning and development of future wastewater management under Sections 201, 208 and 303 of PL92-500."

All of this serves only to subvert the confidence which we, as public officials, would like to be able to have in the substance and intentions of the Study.

II. Public Participation

A. General

Over the past eighteen (18) months, the Town of Andover has expressed its concern with various aspects of this element of the Study on several occasions. (For example, see Appendix VI, pp. 164-168, 205, 210-211, 239-241 and 246-248.) There is no need now to be repetitious.

Yet, in light of what we read in the draft report, we feel that further discussion of the role of local elected and appointed officials is required.

What we found was that the conduct of the Study was a Federal-State-Regional process without institutionalization of municipal input.

It is a mistake to say (as stated at Appendix IV, pp. 2, 7 and 11, for example) that representatives of local agencies were on the Merrimack River Wastewater Management Study Team. Look, for instance, to Appendix I, pp. 391ff. and try to find any mention of local chief

elected or executive officials on the Study Team. Being able to attend public meetings and participating in a few conferences do not provide integration into the planning process: this has been a serious deficiency in the management of the Study. This problem has been compounded further in the Merrimack Valley Planning Commission's (MVPC) area where less direct oversight has been possible because of the absence of chief elected officials (or their designees) from the MVPC's Board of Commissioners.

B. Participation and Information

General purpose local governments had no representation on the technical subcommittee. It cannot be said, either, that the MVPC's staff provided this representation, because of problems internal to that agency during that time.

Similarly, it is not true (as stated at Summary, p.22) that "The first set of wastewater treatment alternatives became available in the Fall of 1973." Nothing substantive was available until the mid-stage public meeting of 4 April 1974, at which costs were made available in net present worth terms (see Appendix VI, p. 105).

III. Socio-Economic Analysis

A. The Preferred Plan

We are most impressed by the absence of any discussion of the socio-economic impacts of the preferred plan (see Appendix IV-A). Of thirteen (13) impact categories, Municipal Finance is the only one in which the preferred alternative is explicitly discussed. The question then, of course, is whether it can be said that the preferred alternative would still in fact be preferred, if its impacts were known.

It is important to note here that the preferred plan was approved by the MVPC on 19 September 1974 (see Appendix VI, p. 109). Thus, several months passed between that time and issuance of the draft report, during which time an evaluation of the impacts of the preferred plan could have been made.

B. Benefit/Cost Analysis

The Town of Andover has articulated its concern with the absence of benefit/cost analysis from the Study on several occasions (see, for example, Appendix VI, pp. 246-248, 250-251). It would seem useful here to quote from our

Town Manager's letter of October 10, 1974 (see Appendix VI, p. 251), a copy of which went to your office:

> It has been said by the staff of the Study that benefit/cost analysis is not possible or reliable in the area of water resources planning. We wonder why, then, the Corps of Engineers has explicitly mandated benefit/cost analysis in its recent regulation regarding "Evaluation of Economic Benefits for Flood Control and Water Resource Planning" (33 CFR Part 341, promulgated August 15, 1974). As interested persons know, over the years the technique of benefit/cost analysis has been developed at least as well in the area of water resources as in any other field of public policy.

It should be noted, too, that the regulations of the Corps of Engineers (33 CFR S. 400(e)(3)) require for all Civil Works projects that:

> Decisions and project recommendations are made in the best overall public interest based on a balanced consideration of the monetary benefits and costs (emphasis added), the degree that public needs are satisfied, and the extent of other beneficial and adverse effects.

Without referring to benefit/cost analysis, one has no way of knowing whether or not a proposal can be justified in the first place.

C. Assumed Benefits

We are concerned with the facile assumption of attractive benefits (see Summary, pp. 14, 96 (para. 11)). For example, there is the prospect of food and game fish flourishing in the Merrimack. However, the Merrimack River Basin Water Supply Study (April, 1975) has showed that there is insufficient (or at least questionable) flow to support anadromous fish.

Such assumed benefits should not be used in the economic or other analyses which are part of this Study, without facts sufficient to establish a high probability of their actually occurring.

D. Fiscal Impact on Municipalities

1. General

We welcome the statement (at Summary, p. 90) which recognizes that "...the fiscal impact of achieving even the 1977 requirement of the law, let alone the long-range goal of 'zero discharge of pollutants', can upset the financial stability of local communities."

2. The Uncertainties of Federal Assistance

The net cost of alternatives is based on continuation of the 75-15-10 cost-sharing formula for eligible expenses.

However, proposals now under consideration by the Ford Administration would reduce the Federal share for construction grants from 75 percent to a level as low as 55 percent (see Federal Register, May 28, 1975, pp. 23107ff.). Any such reduction of the Federal share would have a significant effect here in the Merrimack Valley, where the respective fiscal plights of the Commonwealth and municipalities would make it virtually impossible for them to assume larger shares of the cost of this expensive program.

3. Competing Needs and Scarce Resources

> A clean river will surely enhance the quality of life in the Merrimack Valley. It remains to be seen, however, what value Federal, State and local governments attach to the environment and how much they are willing to sacrifice for reclaiming it.
>
> (Summary, p. 5)

The question here is not one of sacrifice. Instead, it is one of competing demands for public resources. Unfortunately, this important issue does not receive more than passing consideration (see Appendix IV-A, p. 163) in a Study concerned with the expenditure of hundreds of millions of dollars.

IV. Technical Corrections

A. Water Sources

Appendix I, p. 365 should be corrected by deleting the clause, "Future plans call for a 12 mgd water treatment plant in Andover...." This plant has been operational since March, 1974.

B. Wastewater Treatment Plants

Appendix VI, p. 6 states: "Today, the only wastewater treatment plant on the Merrimack from Concord, New Hampshire to the Atlantic Ocean is a primary treatment facility in Newburyport." This statement should be revised to take notice of plants now in development, such as those in Lowell, Haverhill and North Andover (for the Greater Lawrence Sanitary District. The GLSD plant is about 40 percent completed,

as of 30 June 1975. Similarly, the first full paragraph at Appendix V, p. 17 should be corrected to note the presence of one full-time administrative staff.

C. Sewer Financing Methods and Rates

Appendix I, Table 73 (p. 304) should be revised to reflect the sewer service charge of $.30 per hundred cubic feet of water used, effective July 1, 1975, as voted by Andover's Board of Selectmen on June 9, 1975.

V. Institutional Arrangements

We are concerned with the apparent inconsistency of statements regarding institutional arrangements.

On the one hand, we would agree (as a member of the Greater Lawrence Sanitary District) that:

> The GLSD, which will build and operate the secondary facility, is also the logical choice of management agency for the tertiary phase. Institutional complications are avoided, moreover, by preserving the GLSD as a separate, self-contained entity.
>
> (Appendix V, p. 49)

On the other hand, we would have to take issue strongly with the very different conclusion stated elsewhere that:

> Study findings indicate that there is no clear consensus of opinion regarding future institutional arrangements. Most participants to this study agree that institutional changes are in order. The issue at hand is the type and extent of change.
>
> (Appendix V, p. 1)

In the Greater Lawrence Sanitary District, at least, there seems to be a very clear consensus regarding future institutional arrangements and the absence of any need for other than minimal institutional changes.

Likewise, we must record our apprehensions with the prospect of a state environmental utility solution on the Merrimack (Appendix V, p. 81).

As a philosophical tenet and a very practical concern, we believe that the unnecessary removal of this function (or parts thereof) to a higher level of government would impair its responsiveness to local needs.

VI. Conclusions

We support the positions stated in two places in Appendix IV:

> Where does this leave us in our clean up efforts? Admittedly, there are many questions that should be answered before any firm conclusion can be reached. A proven case cannot be made one way or the other. The common sense approach is to continue with the construction of secondary treatment plants fully realizing additional treatment may be required at some future date. Let's ensure the treatment plants operate effectively and efficiently when they do go on line and all pre-treatment and permit requirements are strictly enforced.
>
> An extensive chemical and biological sampling and monitoring program before and after the completion of the State-EPA implementation program is the only foreseeable method for establishing a basis on which to make sound decisions. Let's take one step and see where we are but let's plan and be prepared to take the second step if it becomes necessary.
>
> (p. 85)

> The statements above point out there are factors such as the operation and maintenance of advanced systems which may periodically lower water quality levels below acceptable standards. Therefore, the recreational benefits designated in the socio-economic report such as swimming, boating and fishing can be questioned even with the implementation of advanced waste treatment.
>
> Based on the number of unknown factors and questionable findings, firm conclusions on water quality benefits and levels of water quality improvement can only be described as speculative at best. The monetary investment required to achieve speculative benefits is difficult to justify at this time. The logical approach is to continue with the State-EPA program for secondary treatment and monitor the improvement of the river's water quality. Only then can a sound decision be made to proceed or not to proceed with advanced waste treatment.
>
> (p. 87)

At the same time, however, we are puzzled by the apparent contradiction between these statements and what appears in the Summary (p. 97, para. 8):

The implementation of the recommended plan which provides for advanced treatment of point sources of pollution as outlined in this report should be initiated as soon as practicable in accordance with a schedule of priorities as established by the Commonwealth of Massachusetts and the Environmental Protection Agency.

In conclusion, we appreciate the opportunity to review and comment on this Study.

By direction of the Board,

Milton Greenberg, Chairman

J. Maynard Austin,
Town Manager

cc: Hon. Edward M. Kennedy
Hon. Edward W. Brooke
Rep. Paul E. Tsongas
Excellency Michael Dukakis
Sen. William L. Saltonstall
Rep. Gerald M. Cohen
Vincent Ciampa
E. James Gaines
Stephen E. Aradas
Charles H. Wesson, Jr.
Joan Gilliatt
Hon. John J. Buckley'
Hon. George Kay Katsaros
Hon. Byron J. Mathews
Cark W. Woekel, Jr.
Dana A. Miller
Chairman John Coady

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

REPLY TO
ATTENTION OF:

NEDPL-W

28 July 1975

Mr. Milton Greenberg
Chairman, Board of Selectmen
Town Hall
29 Main Street
Andover, Massachusetts 01810

Dear Mr. Greenberg:

This is to acknowledge the receipt of your comments on the Merrimack Wastewater Management Study. It is apparent you have expended considerable time and effort in reviewing the report and we appreciate your efforts. We are deeply concerned with some of the comments and accusations within your letter and wish to respond to them for the benefit of the understanding of all parties.

There appears to be a major disagreement between Andover and the Greater Lawrence Sanitary District (GLSD) of which the Town of Andover is a member, on the nature and content of the Merrimack Report and its recommendations. Review comments (20 June 1975) from the GLSD state:

> "The Greater Lawrence Sanitary District applauds the recommendations of the Corps of Engineers. You (Col. Mason) should be well pleased with those who have contributed so much to this project."

Because your community is an active member of the district, which looks after the best interests of its member communities, and which has thorough and knowledgeable representation within the management structure of the GLSD, we are perplexed on the disparity of opinion.

NEDPL-W 28 July 1975
Mr. Milton Greenberg

In reference to specific comments as contained in your letter, we submit the following and in the same order of format as your letter.

I. Scope and Purpose of the Study

A. General

As stated in several areas throughout the report (Summary, pp. 11, 95, 97), the Merrimack Wastewater Management Study was never intended to be a complete 201, 208 or 303 document. Such planning is a State responsibility. As required by law, certain components necessary for official 201, 208 or 303 plans such as waste load allocations, pollution abatement priorities, water quality standards as well as their revisions, etc. must be developed by the state. Recognizing that we received our Congressional directives prior to the enactment of PL 92-500, and that EPA was still in the process of promulgating its interpretations and regulations for Sections 201, 208 and 303 while the Merrimack Study was in progress, one of our main objectives was to assist both state and regional agencies in formulating these official plans wherever possible.

In reference to the second part of the your Item I, the Plan of Study (Appendix IV, p. 11) was developed and approved by the member agencies of the Merrimack Technical Subcommittee. The Plan of Study was a general management tool to guide study activities with inherent flexibility and so written as to be able to incorporate changing needs throughout the duration of the study. The "process" that you refer to (Appendix IV, p. 4) is in reference to the process of impact assessment. There is no contradiction between pgs. 11 and 4 since the statements quoted by you refer to two different subjects. Further, "the impact assessment process actually evolved during the conduct of the study itself." (as stated in Appendix IV, p. 4).

B. Editorializing

In addition to being as specific as possible with the various socio-economic, aesthetic, hygienic, and biological impacts of each system alternative (pp. 46-80), Appendix IV was a candid attempt to describe the process of impact assessment utilized during the Merrimack Wastewater Management Study. Since the multi-agency, multi-disciplinary methodology used in the study was unique to water resources planning, it was thought that others could benefit in future studies if the mistakes and successes could be accurately documented in a useful format. Some editorializing was therefore inevitable.

In your first citation "Regional solutions..." (Appendix IV, p. 5), the final sentence of the paragraph appears to have been overlooked. In essence it states that both local and regional issues must be examined. The Water Resources Council also recognizes that impacts must be assessed from more than just a local perspective as one of the specific accounts to be investigated under the Principles and Standards in National Economic Development.

C. Unwarranted Presumptions and Speculation

The authorizing resolutions under which this study was conducted state: "The scope of such study shall be established with the consultation of the Commonwealth of Massachusetts and the Environmental Protection Agency and shall include measures for wastewater management, including clean-up and restoration in the interest of water supply, environmental quality, recreation, and fish and wildlife and shall incorporate the overall water resources and wastewater management program previously determined by the Commonwealth of Massachusetts and approved by the Environmental Protection Agency." Each engineering alternative developed during the Merrimack Wastewater Management Study made a special effort to accommodate approved and accepted future land use plans, future regional water and sewer plans, and individual town engineering reports on wastewater management and water supply. By accommodating these plans and using them as a basis for design, we feel that the future of the communities in the Merrimack River Basin will most certainly be influenced. We have made no sole assumption that the "quality of life revolves around wastewater management" in fact the study viewed growth as induced by other parameters.

In reference to study recommendations:

At the request of the Executive Office of Environmental Affairs for the Commonwealth of Massachusetts and through extensive inter-agency coordination and cooperation, much of the material developed during the Merrimack Study has been included in the Massachusetts Division of Water Pollution Control 303(e) Basin Plan for the Merrimack River. The Basin Plan, to be modified and updated in five year increments by the Commonwealth, will be the principal means of obtaining Federal grants for future water pollution control projects.

II. Public Participation

Because Andover officials expressed a desire, for whatever reasons they may have had, to "withhold participation in the Merrimack

NEDPL-W 28 July 1975
Mr. Milton Greenberg

Wastewater Management Study," (Selectmen Statement of 26 Nov 73) we feel it is quite unfair to state that the Study was a Federal-State-Regional process without institutionalization of municipal input."

The Merrimack Valley Planning Commission (MVPC) of which Andover is a member, was contracted with in the amount of $43,000 to assist the study in public participation. Approximately twenty-two (22) announced meetings for the public were held within the MVPC communities alone as well as many hours of personal interviews, speaking engagements, etc. conducted by my staff and the study team. The MVPC Commissioners were briefed throughout the planning effort and at specific workshops and public meetings approved the recommended plan as presented in the Summary Report. Elected officials throughout the study were given the opportunity to voice their concerns on the draft recommended plan to the entire Technical Subcommittee. Several communities gratefully accepted the invitation to participate and in some instances their statements directly influenced the final recommendations made in the report.

III. Socio-Economic Analysis

A. Preferred Plan

The socio-economic impacts of the recommended plan are compared with other alternatives in the Impact Assessment Summary on p. 71 of the Summary Report. Because the GLSD retains its identity within each plan, it should be recognized that the socio-economic assessment does not markedly change between alternatives.

B. Benefit/Cost Analysis

The reference which you make concerning Corps of Engineers regulations are not directly applicable to this study. The Merrimack Wastewater Management Study was one of five nationwide pilot studies and for which the program had special criteria to follow. Our mission was one of strictly planning and we operated under special guidelines and regulations quite different from those applying to traditional Corps projects such as flood control. Because the Corps of Engineers has no authority at this time to justify the construction of any phase or component of this study, the specific benefit/cost ratios were not developed. It should be noted on a national scale that benefit/cost ratios are not required for wastewater treatment plant construction.

Approximately 25 per cent of study funds were invested in assessing the biological, aesthetic, socio-economic and hygienic impacts of achieving the 1977, 1983 and 1985 requirements and goals of PL 92-500. Wherever possible, the benefits and costs associated with achieving each level of water quality improvement were quantified. Appendices IV-A, pp. 108-120 and IV-B, volume 2, pp. 220-251, serve as examples. I know of no instance where my staff has stated that benefit/cost analysis is not possible in the area of water resource planning.

C. Assumed Benefits

Natural flow in the Merrimack River during the summer low flow periods can present a problem to anadromous fish restoration. However, during the critical spring and fall migration periods, the flow conditions in the Merrimack River are sufficient for fish requirements. The game fish analyses conducted during the wastewater study addressed both indigenous warm water game fish and anadromous fish. Evidence developed by the study team indicates that desirable warm water game fish populations will markedly improve with increased water quality in the Merrimack River.

D. Fiscal Impact on Municipalities

The fiscal impact of achieving the goals and requirements of PL 92-500 have been the subject of greatest concern throughout the Merrimack Wastewater Study. However, we could not arbitrarily assume that changes would be made in the present Federal-State-local cost sharing formula.

V. Institutional Arrangements

As stated in Appendix V, the institutional changes that may be necessary to accommodate the long range goals of PL 92-500 have been the subject of much controversy. The institutional issue must be examined for both point and non-point sources of pollution as required by PL 92-500. In terms of point sources of pollution, the operational efficiency of the GLSD can only be proven with time. We recognize the identity of the GLSD and state that it is a logical choice for a future management structure. The second paragraph that you cite, however, refers to the institutional changes that may be necessary to accommodate both non-point and point sources, and therefore, there is no contradiction as you suggest.

NEDPL-W 28 July 1975
Mr. Milton Greenberg

On the basis of our findings, small tributary streams throughout the basin have high concentrations of nitrates and coliform bacteria. Failing septic systems, non-point sources, appear to be the principal cause of small stream degradation. Failing septic systems are due to a number of causes, but are principally the result of building new homes, subdivisions or apartment complexes in areas that should not be developed, such as areas shallow to bedrock and with a high groundwater table or unsuitable soil conditions. Whether existing institutions can successfully implement the land use management practices necessary to control or prevent non-point sources of pollution is questionable. The institutional issue will therefore be logically addressed in Section 208 planning where strategies to control non-point sources will be developed.

The final statement cited in your letter (Summary, p. 97 paragraph 8) puts the implementation responsibilities where they rightfully belong, namely with the State of Massachusetts. The Corps has no authority to implement any measures that may be suggested within the report. If any utility is to be made of the Merrimack Wastewater Management Study, action must come from the agencies of the Commonwealth of Massachusetts and the Environmental Protection Agency according to their established needs and priorities.

Sincerely,

JOHN H. MASON
Colonel, Corps of Engineers
Division Engineer

Office of the Mayor, City of Lawrence, Massachusetts

John J. Buckley
MAYOR

FRED T. EAD
Secretary To The Mayor
Tel. 685-5839

July 3, 1975

Colonel John H. Mason
Division Engineer
Department of the Army
New England Division
Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Colonel Mason:

Following its review of the Merrimack Wastewater Management Study, the City of Lawrence would like to submit the following comments:

1. As acknowledged in the report the Greater Lawrence Sanitary District (which includes the City of Lawrence) has under construction a secondary treatment facility which is designed to meet the State-EPA standards. It is not clear whether or not this facility will in fact produce an effluent of the designed quality. However, the City feels this facility should be in operation for a period of time sufficient to evaluate its effectiveness prior to consideration of an advanced wastewater facility.

2. There is no firm knowledge at this date as to the relative contribution of non-point source pollution to the degradation of the river. Without this knowledge, it is impossible to estimate the relative effect of advanced treatment beyond the effect of the net secondary treatment facility already under construction on the over all quality of the Merrimack River. Tne "208" planning effort is intended not only to design land use policies which will minimize future non-point source pollution but also to attempt to measure as much as possible <u>current</u> non-point source

pollution of the river. Until this planning effort is complete, it would seem impossible to set priorities for coping with the remaining pollution to the Merrimack on a cost/effective basis.

3. The costs to the City of Lawrence of the advanced treatment facility, even with the current ratio of State and Federal assistance, are prohibitive. From the study it appears that they will be greater than the secondary treatment facility under construction despite the fact that the net benefit of this additional plant will be substantially less than the benefit of the secondary plant in terms of its impact on the quality of the river. It is the ongoing costs of operation and maintenance which create the greatest burden on the local taxpayer. Municipalities must assure themselves that the benefits to be gained from any expenditure of local funds are sufficient to justify the expense of the program. It is not clear at this time that the benefits of an advanced treatment facility are sufficient to meet this test.

4. The problem of dealing with storm water overflow from combined sewers is one that should be given a high priority by Lawrence. Without a solution, the secondary facility will not be able to achieve the planned for impact on the quality of the river. The City of Lawrence should study the impact of the new facility with and without a solution to the storm overflow of the combined sewer system. If the benefit to be derived is significant then the City should consider the MWMS recommendation of building overflow chambers at several points within the intercepting system to provide storm overflow storage before the pumping station. It appears that this is the least expensive solution to the problem.

In summary, the City of Lawrence feels additional study and answers are needed prior to any decision to move beyond the secondary treatment facility now under construction. The local communities involved in any future advanced treatment program should have the opportunity to determine what inter-community relationships will be established. Implementation of wastewater management should remain decentralized as much as is economically feasible. Relationships between regional districts established for the purpose of construction and operation of treatment facilities should be on a voluntary cooperation basis with perhaps monitoring by the state or the EPA.

July 3, 1975

I hope that these comments will be useful in determining the next steps to be taken. I would like to receive any revisions, comments or recommendations to the study which will be issued by your agency following the review period.

Very truly yours,

John J. Buckley
Mayor

JJB/mf

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

REPLY TO
ATTENTION OF:

NEDPL-W

17 July 1975

Honorable John J. Buckley
Mayor of the City of Lawrence
City Hall
200 Common Street
Lawrence, Massachusetts 01840

Dear Mayor Buckley:

This reply is to acknowledge receipt of your comments on the Merrimack Wastewater Management Study. The time and effort you have expended in the report review are greatly appreciated.

We recognize your concern over the cost for achieving the long range goals of PL 92-500 and it is our understanding that a complete evaluation of all treatment facilities throughout the Merrimack Basin, either presently under construction or in final design, and their net effect on water quality improvement will be made before any commitments are made to advanced waste treatment. The necessary water quality evaluations will be carried out under the auspices of the Massachusetts Division of Water Pollution Control as described in the 303 (e) Basin Plan for the Merrimack River.

The water quality improvement evaluation in combination with the area-wide planning to be carried out under Section 208 of PL 92-500 should prove essential to selecting the rational course of action we all want to follow.

Sincerely,

JOHN H. MASON
Colonel, Corps of Engineers
Division Engineer

Board of Selectmen

Town Hall
TEWKSBURY, MASSACHUSETTS 01876
851-4311

July 16, 1975

John H. Mason
Colonel, Corps of Engineers
Division Engineer
424 Trapelo Road
Waltham, Mass. 02154

SUBJECT: Merrimack Wastewater Management Study Report

Dear Colonel Mason:

Replying to your correspondence of June 2, 1975, please be advised that the subject report has been received by this office.

The Board of Public Works, at their meeting of July 10th, voted to request your cooperation in bringing to the attention of this Board anything specific relating to the Town of Tewksbury.

Your cooperation in this matter is appreciated.

Very truly yours,

Ruth E. Aubert

Ruth E. Aubert
Executive Secretary

REA/sb

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

REPLY TO
ATTENTION OF:

NEDPL-W

28 July 1975

Mr. Richard A. Adams, Sr.
Chairman, Board of Selectmen
Town Hall
Tewksbury, Massachusetts 01876

Dear Mr. Adams:

This reply is to acknowledge receipt of your comments on the Merrimack Wastewater Management Study.

One of the main purposes of the Merrimack Study was to assist both state and regional agencies in meeting the long range goals and requirements of the Federal Water Pollution Control Act Amendments of 1972. Recognizing that the Town of Tewksbury has already made substantial commitments to improve the quality of the Merrimack River by treating its wastewater at the Lowell regional treatment plant, the only action proposed in the Merrimack Report that might affect your town would be the upgrading of the Lowell facility to advanced treatment. Such an upgrading, if needed, would take place in the distant future. It is our understanding that the need for additional treatment will be evaluated by the Massachusetts Division of Water Pollution Control and any action required by the towns in the Merrimack Basin will be established by the Division in accordance with State-EPA priorities.

Sincerely,

JOHN H. MASON
Colonel, Corps of Engineers
Division Engineer

TEL. 685-1612

GREATER LAWRENCE SANITARY DISTRICT
598 ESSEX STREET • P.O. BOX 382
LAWRENCE, MASSACHUSETTS 01842

June 20, 1975

John H. Mason, Colonel
Department of the Army
New England Division, Corps Of Engineers
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Colonel Mason:

The Greater Lawrence Sanitary District applauds the recommendations of the Corps of Engineers. We realize that a very great amount of time and effort have gone into this report. You should be well-pleased with those who have contributed so much to this project.

While we appreciate the fact that many questions may be raised by this study, we do not believe that any overall approval of the report is indicated at this time. If future approval should be requested on specific parts of the report, more detailed costs and evaluations may be required.

I have enclosed a copy of Dr. Robert H. Culver's comments on your report.

Very truly yours

GREATER LAWRENCE SANITARY DISTRICT

Francis J. Howe

Adminis. Ass't

FJD/mz
Enc: 1

RECOMMENDATIONS OF CORPS OF ENGINEERS FOR MERRIMACK RIVER BASIN AS THEY AFFECT GREATER LAWRENCE SANITARY DISTRICT AND MEMBER CITY AND TOWNS

1. At present the existing administration of wastewater management should be continued. Future changes in administration may be advisable but cannot be recommended now. Section 208 studies will address this question. (p. 8)

2. Local treatment preferred to regionalization. (p. 8)

3. Urban drainage (exclusive of combined sewers) did not have a significant impact on river water quality. (p. 10)

4. Detention of combined overflows less expensive than separation. (p. 10)

5. All future sewers should be separate sewers. (p. 10)

6. Non-point sources such as private septic systems, dumps, marinas and farms were significant to river water degradation, and until these are controlled there is no assurance that the recommended plan will achieve the PL 92-500 goals. (p. 10)

7. Land disposal systems cannot be developed because of physical and psychological constraints. (p. 11)

8. Recommend ozonation for disinfection in preference to chlorination. This may be important for the future development of GLSD but is energy-intensive. (p. 11)

9. The combined disposal of solid wastes and sewage sludges should be considered. (p. 11)

10. The study did not generate a specific basin plan. However, it will be used

as a basis for the official basin plan submitted to EPA by the Commonwealth of Massachusetts. This will give GLSD an opportunity to have some input before it becomes an official plan. (p. 11)

11. Total population projections used (p. 24):

	1970	1990	2020
Andover	23,695	38,000	39,000
Lawrence	66,915	69,000	71,000
Methuen	35,456	47,000	48,200
North Andover	16,284	26,000	29,400
GLSD	142,350	180,000	187,600
CDM Design Criteria Sewered Populations	113,500	163,250 (1995)	213,000

12. Wastewater Flows Projections (p. 25) (mgd):

	1990					2020
	Residential	Industrial	Infiltration	Stormwater	Total	Total
Andover	2.35	6.45	0.83	-	9.63	14.18
Lawrence	4.86	16.63	2.92	4.90	29.31	37.41
Methuen	3.04	0.93	1.82	-	5.79	7.33
No. Andover	1.61	1.61	0.56	-	3.78	5.23
GLSD	11.86	25.62	6.13	4.90	48.51	64.15
CDM Design Criteria					52.00	70.00

13. Defines the effluent from "Advanced Waste Treatment" (p. 26):

Color	50 Color units
Turbidity	10 JTU
Fecal Coliforms	200/100 ml
TKN as N	0.5 mg/l
Nitrate as N	1.0 mg/l
Phosphates as P	0.05 mg/l
pH range	6.0 to 8.5
Solids	
Dissolved	400 mg/l
Suspended	1 mg/l
BOD_5	1 mg/l
TOC	5 mg/l
COD	20 mg/l
DO	6 mg/l

Our comments on the above:

a. Doubtful that a waste treatment plant can achieve 0.05 mg/l phosphate (as P).

b. Same applies to BOD_5 of 1 mg/l.

14. Costs are generalized and not specific for any plant. (p. 36)

15. Capital costs for advanced wastewater treatment are estimated at 1.125 times the cost of secondary plus best practicable. (p. 37)

16. Operating costs for advanced wastewater treatment are estimated at 2.09 times the cost of secondary plus best practicable. (p. 37)

17. Sludge disposal by incineration in regional incinerators, one to be located in GLSD. (p. 39)

18. Regional septage receiving station planned for GLSD. No increase in capacity of planned facilities required. (p. 40)

19. Combined sewage overflows to be intercepted, stored and eventually discharged to treatment plant at GLSD. (p. 40)

20. Estimated construction costs for GLSD system, now under construction, including collection systems (State-EPA program):

Andover	$22.48 million dollars
Lawrence	35.78 million dollars
Methuen	16.41 million dollars
No. Andover	9.10 million dollars
Total GLSD	$83.77 million dollars

(p. 41)

21. Estimated construction costs for the Recommended Plan.

a. 1977 Secondary Treatment

b. 1983 Best Practicable Treatment

c. 1985 Advanced Wastewater Treatment (See Item 13 above.)

Total Project Costs (millions of dollars)

	Collection System	1977 Secondary	1983	1985	Total
Andover	24.77	14.75	0.93	8.34	48.82
Lawrence	32.95	31.05	2.69	22.91	89.60
Methuen	6.60	6.40	0.55	4.47	18.02
No. Andover	7.24	4.14	0.36	3.11	14.85
Total GLSD	71.56	56.34	4.53	38.83	171.29

(p. 78)

O and M Costs (millions of dollars)

	Collection System	1977 Secondary	1983	1985
Andover	0.09	0.29	0.08	0.48
Lawrence	0.54	0.67	0.23	1.35
Methuen	0.03	0.14	0.05	0.25
No. Andover	0.03	0.10	0.03	0.18
Total GLSD	0.69	1.20	0.39	2.26

(p. 79)

Net Cost to Municipalities

	1977	1983	1985	Total
Andover	4.72	0.04	0.50	5.26
Lawrence	3.73	0.15	1.54	5.06
Methuen	3.71	0.05	0.45	4.21
No. Andover	4.96	0.03	0.26	5.25
Total GLSD	17.12	0.27	2.75	19.78

(p. 79)

Note for above tables: (1) Collection system costs are for system up to 1990; (2) secondary costs include interceptors, treatment works, incinerators and outfalls; (3) O & M costs are for initial year; (4) Lawrence costs include provision for collection, storage and treatment of combined sewer overflows (1990).

Estimated Annual User Cost (3.5 persons/connection)

	1977 with Collection system	1977 without Collection system	1983	1985
Andover	$25	$11	$3	$17
Lawrence	29	27	5	30
Methuen	32	11	4	22
No. Andover	57	12	4	25

(p. 80)

22. Reservations relative to achievement of goals: (p. 87-92)

(a) Should AWT be applied before non-point sources and combined sewer overflow problems are solved?

(b) Given nutrients in typical secondary effluents, will "B" water quality be achieved?

(c) Feeder streams draining unsewered subdivisions showed high coliform counts and nitrate concentrations from overflowing septic tanks. Land management practices are essential to goal achievement.

(d) AWT will reduce heavy metals and nutrients to acceptable levels provided that:

(i) AWT plants perform up to standards.

(ii) Discharges from other than municipal sources are strictly controlled.

(e) Local governmental institutions must be prepared to fully staff the plants with qualified operating, monitoring and enforcement personnel.

(f) Existing plant performance leaves much to be desired. Must improve in future.

23. Appendix I-B, Industrial Listings confusing, hard to follow, based on old data and incomplete. Should be summarized and totaled by community.

24. Appendix IV-B, Biological Impacts, Vol. 1, p. 300-301. Projects no substantial environment improvements after secondary treatment is instituted. However, without secondary treatment, increased wastewater flows would likely have a highly negative impact on the biodata, AWT indicated.

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

REPLY TO
ATTENTION OF:

NEDPL-W

15 July 1975

Mr. Francis J. Dowd
Administrative Assistant
Greater Lawrence Sanitary District
598 Essex Street
Lawrence, Massachusetts 01852

Dear Mr. Dowd:

This is to acknowledge receipt of your review letter concerning the Merrimack Wastewater Management Study. The time and effort you have invested in reviewing the report is greatly appreciated.

We would like to reassure the members of the Greater Lawrence Sanitary District that more detailed costs and evaluations will most certainly be required before any firm commitment is made to implement advanced waste treatment. The Massachusetts Division of Water Pollution Control will evaluate the net improvement on the river's water quality after all treatment plants currently under construction or in final phases of design have become operational.

In closing, we would like to reiterate that your comments, complete with inclosure remarks, were welcomed and that they will be included in the Comments Appendix.

Sincerely,

JOHN H. MASON
Colonel, Corps of Engineers
Division Engineer

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203

AUG 4 1975

Colonel John H. Mason
Division Engineer
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Colonel Mason:

We have generally reviewed the Merrimack Wastewater Study and would like to take this opportunity to present our comments.

We believe that the data collected and information generated by the study will provide a framework for the ongoing programs under Section 201, 208 and 303(e) of the Federal Water Pollution Control Act Amendments of 1972. Ongoing efforts by State, areawide and local agencies supplemented by the Merrimack Wastewater Study should result in an effective basin wide water quality management program based upon a thoughtful evaluation of alternative control options.

Improved water quality brought about by sound water quality management should result in greater protection of existing and potential supply sources. As indicated in Appendix IV-D "Hygienic-Public Health," improper disposal of sanitary wastes in unsewered areas can seriously jeopardize the quality of water supply sources be they individual or community. As noted in the report special consideration of this problem in the Merrimack River Basin is required since over 50 percent of the population is served by on-lot disposal systems.

Several issues reevaluated in the wastewater study will require special additional analysis and discussion prior to being used as a basis for formulation of program directions. These are:

- Combined sewer control - The recommendations for detention and subsequent treatment at the municipal treatment facilities require substantial capital expenditures. Several alternative methods of dealing with combined sewer overflows are possible each resulting in a different downstream water quality response. These various alternatives should be compared on the basis of performance, cost and water quality benefits.

- Priorities - The financial resources required to implement a wastewater treatment program in the basin are large. Given that this expenditure will take place over a number of years and that

limited funding will be available, a priority system should be established to guide funding so that maximum water quality benefits are achieved at the earliest possible date.

- Non-point sources and separate stormwater discharges - A clearer distinction between the two should be made. The study points out that non-point sources may interfere with the attainment of 1977 and 1983 water quality goals while also stating that stormwater runoff, a prime vehicle for diffuse non-point sources, may not require treatment. This could be interpreted as contradictory.

Thank you for the opportunity to comment on the Merrimack Wastewater Study. If you have any comments or questions regarding our views, please contact Walter Newman at 617-223-5134.

Sincerely yours,

John A. S. McGlennon
Regional Administrator

cc: T.C. McMahon)
J. Dalton) Mass. DWPCC
No. Middlesex Area Comm.
Merrimack Valley RPC